

# CLINICAL PROCEDURES USER MANUAL

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Department of Veterans Affairs VistA Health Systems Design and Development

# **Revision History**

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## **Table of Contents**

1.	Introduction	1-1
	Intended Audience	1-6
	Related Manuals	1-6
	Product Benefits	1-6
2.	Working with CP User	2-1
	Opening CP User	
	Defining CP User Icons	2-1
	Selecting a Patient	
	Defining the Parts of the Main CP User Window	2-3
3.	Clinical Procedures Process, Part 1	3-1
	Ordering a Consult Procedure in CPRS	3-1
	Check in a new study	3-8
	Updating study status to correct errors	3-14
4.	Clinical Procedures Process, Part 2	4-1
	Completing the Procedure	4-1
	Entering the interpretation into the TIU Note	
	Entering Encounter Information	4-7
	Signing Off	4-12
	Viewing Clinical Procedures Results	4-14
	Linking Consent Forms and Images to CP Documents	4-19
<b>5.</b>	Glossary	5-1
6	Index	6-1

Table of Contents

#### 1. Introduction

Clinical Procedures (CP) is a new VistA package that provides features that can be used across clinical departments, such as general medicine, cardiology, pulmonary, women's health, neurology, and rehabilitation medicine. CP is a conduit for passing patient results, using HL7 messaging, between the vendor and VistA. Patient test results are displayed in the Computerized Patient Record System (CPRS). CP includes three modules, which are CP User, CP Manager, and CP Gateway.

CP User is the primary application that clinicians use. For example, you can place an order for a procedure, such as an EKG, through the Consults tab or Orders tab in CPRS, or Order Entry. Then you can use CP User to check in a patient and initiate the actual procedure. If the procedure is performed on a bi-directional instrument, the patient demographics are automatically transmitted to the instrument. When the procedure is complete, the result is transmitted back to VistA Imaging and attached to a TIU note/document that is associated with the original procedure order.

If the procedure is performed on a uni-directional instrument, you use CP User to match the instrument results to the requested procedure. The TIU note is created when the instrument results are submitted to VistA Imaging. Standard Consults functionality is used to complete and sign the TIU note. The main purpose of CP User is to link the results from the automated instrument to the procedure ordered through Consults in CPRS.

System managers and clinical application coordinators use CP Manager. The main purpose of this application is to add and edit automated instruments and procedures in the CP database. CP Manager is also used to configure the site files and required system parameters.

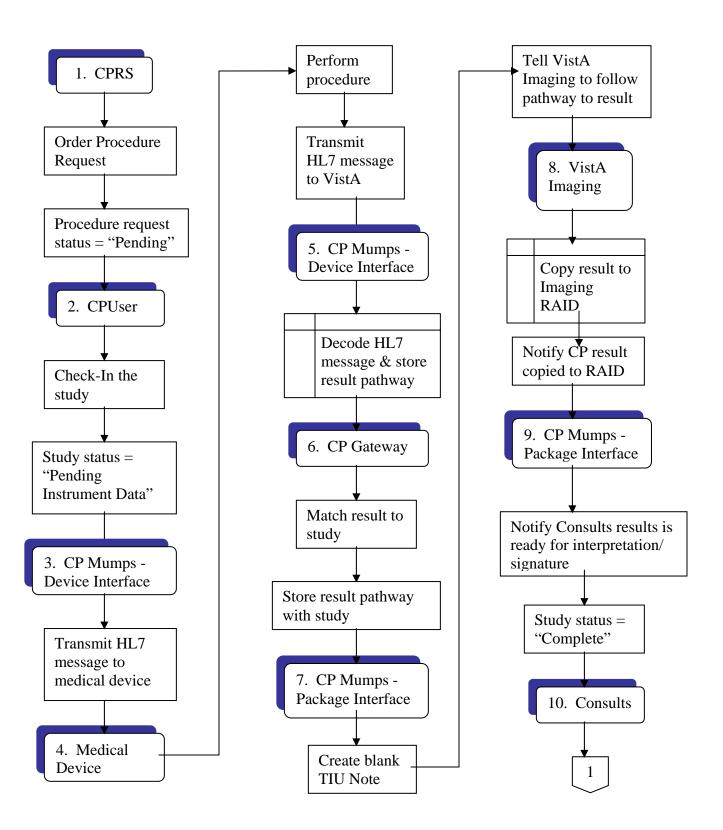
CP Gateway manages the flow of information from the instrument interfaces to CPRS. CP Gateway polls the system regularly for new data from instruments and processes this data into usable attachments for the VistA Imaging system.

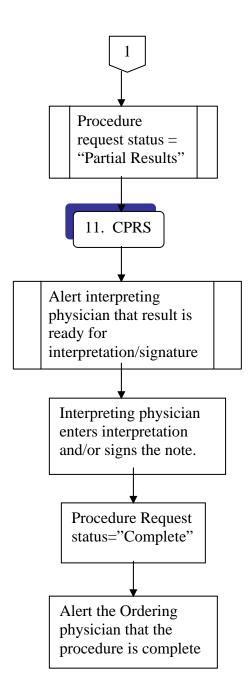
Topics discussed in this chapter are:

- Intended Audience
- Related Manuals
- Product Benefits

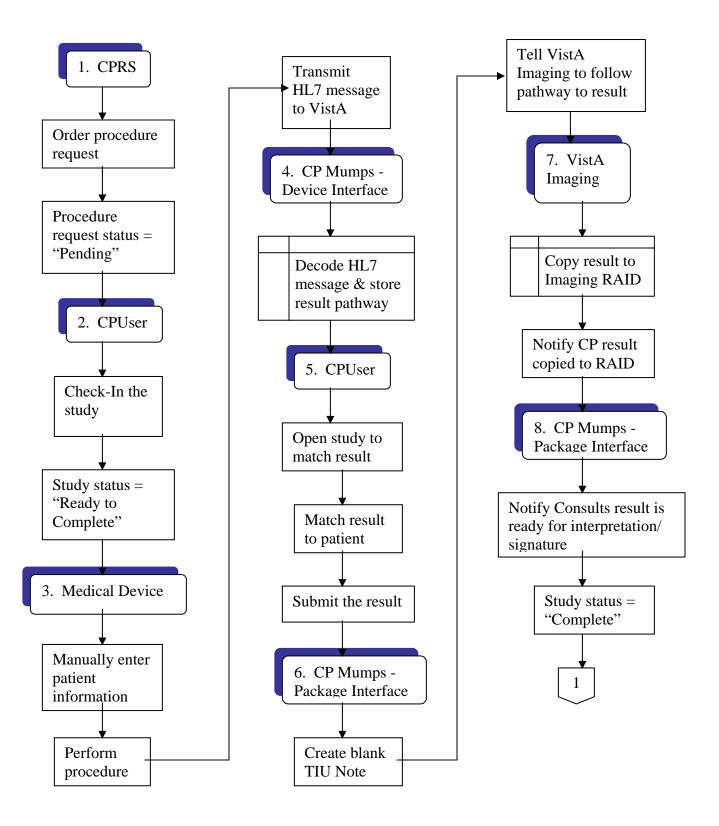
The following pages contain flowcharts explaining the bi-directional and uni-directional Clinical Procedures process flow.

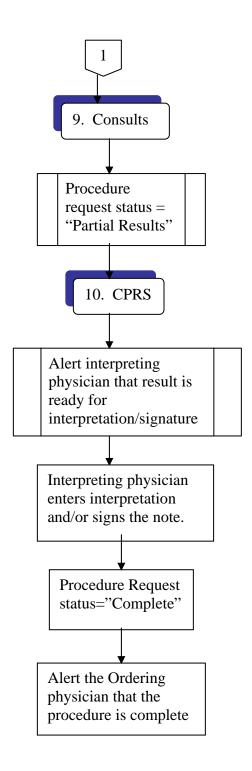
#### **Clinical Procedures Bi-Directional Interface Process Flow:**





#### **Clinical Procedures Uni-Directional Interface Process Flow:**





#### **Intended Audience**

This User Manual is intended for use by clinicians, physicians, nurses, technicians, TSO, and IRMS. End users should be familiar with the following:

- Windows operating systems
- CPRS functionality

#### **Related Manuals**

Here is a list of related manuals that you may find helpful:

Clinical Procedures Installation Guide

Clinical Procedures Technical Manual and Package Security Guide

Clinical Procedures Implementation Guide

Clinical Procedures Release Notes

**CPRS** User Manual

Consult/Request Tracking User Manual

Consult/Request Tracking Technical Manual

Text Integration Utilities (TIU) Implementation Guide

Text Integration Utilities (TIU) User Manual

VistA Imaging System (Clinical) User Manual

You can locate these manuals in the <u>VistA Documentation Library (VDL)</u>. Select **Clinical** from the VDL web page, select the package you want, and then select the manuals. For example, you can select CPRS on the left side of the page. The list of CPRS manuals is displayed.

#### **Product Benefits**

#### • Common User Interface

Clinicians can use CPRS to enter, review, interpret, and sign CP orders. CP documents in TIU obey Authorization Subscription Utility (ASU) Business Rules. The update users functionality currently used by Consults determines which users are allowed to access or edit CP documents.

#### Integration

Clinicians order procedures in CPRS. Orders are processed through the Consult/Request Tracking Package (Consults) and data is interpreted, entered, and displayed through CPRS. Final results of the CP procedure are displayed by VistA Imaging. Ordering, viewing, reviewing, interpreting, and signing the CP medical record is accessed through one location, the CPRS Consults tab. You use CP User to check in patients. CP User also links the result from the automated instrument to the procedure ordered through Consults.

#### • Variety of Accepted File Types

CP is able to accept data/final result report files from automated instruments. The supported imaging file types are the following:

.txt Text files
.rtf Rich text files
.jpg JPEG Images
.jpeg JPEG Images
.bmp Bitmap Images
.tiff TIFF Graphics (group 3 and group 4 compressed and uncompressed types)
.pdf Portable Document Format
.html Hypertext Markup Language

.DOC (Microsoft Word files) are not supported. Be sure to convert .doc files to .rtf or to .pdf format.

#### • Links to Other Packages

CP interfaces with packages such as Computerized Patient Record System (CPRS), Consult/Request Tracking package, Text Integration Utility package (TIU), and VistA Imaging.

#### • Interface Between CP and Imaging

Certain images such as consent forms and report objects are acquired, processed, stored, transmitted, and displayed by the VistA Imaging package. This interface between CP and Imaging replaces the existing capture interface between Medicine 2.3 and VistA Imaging.

#### • Inpatient and Outpatient Workloads

The Hospital Location, where the procedure is performed, is defined in the CP Definition file (#702.01). The hospital location determines which Encounter Form is presented to the end user. CPRS and TIU parameters allow for the configuration of TIU software to display the electronic encounter form and prompt users to enter workload data. The data is then passed to the Patient Care Encounter software (PCE) for inpatients and outpatients.

Introduction

## 2. Working with CP User

This chapter describes how to get started with CP User.

Topics discussed in this chapter are:

- Opening CP User
- Defining CP User Icons
- Selecting a Patient
- Defining the Parts of the Main CP User Window

## **Opening CP User**

With CP User, the result from the automated medical device is linked to the procedure that was ordered through the Consults tab.

• Double-click **CP User** on your desktop. If you are not currently logged into the VistA system, you need to enter your access and verify codes. Click **OK**. The main CP User window is displayed.

## **Defining CP User Icons**

Select View > Use Toolbar.

- Open Patient Opens a new patient record.
- Refresh Patient Refreshes the currently selected patient's information.
- Check-in New Study Checks-in a patient and opens a new study.
- Open Study Opens a currently selected study.
- Delete Study Deletes a currently selected study.
- Help Provides on-line help for this package.
- Clinical Procedures Home Page Goes to the Clinical Procedures Home Page on the Web.

## **Selecting a Patient**

- 1. Open CP User.
- 2. Select **File** > **Open Patient**. The main CP User screen lets you select a patient that has a consult procedure ordered. You can choose **Patient**, **Team**, **Clinic**, or **Ward**.
  - Choose **Patient** if you want to select a patient by name, complete SSN, or first initial of the last name and the last four digits of the SSN.
  - Choose **Team** if you want to select a patient from a specific team list defined in the OE/RR List file (#100.21).
  - Choose **Clinic** if you want to select a patient from selected clinic appointments for a predetermined clinic and date.
  - Choose **Ward** if you want to select a patient from selected MAS wards.

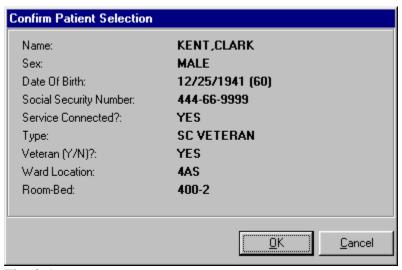


Fig. 2-1

- 3. Double-click the patient's name. A confirmation screen is displayed, which shows additional information about the selected patient. See Figure 2-1. If you select a sensitive patient, a sensitive patient window is displayed indicating that the patient's information should only be accessed on a need to know basis.
- 4. Click **OK**. Figure 2-2, the main CP User window is displayed.

## **Defining the Parts of the Main CP User Window**

In this main window, you can select a treating specialty from the left and view a list of procedures within that treating specialty on the right. Click the column headers to sort them in ascending or descending order.

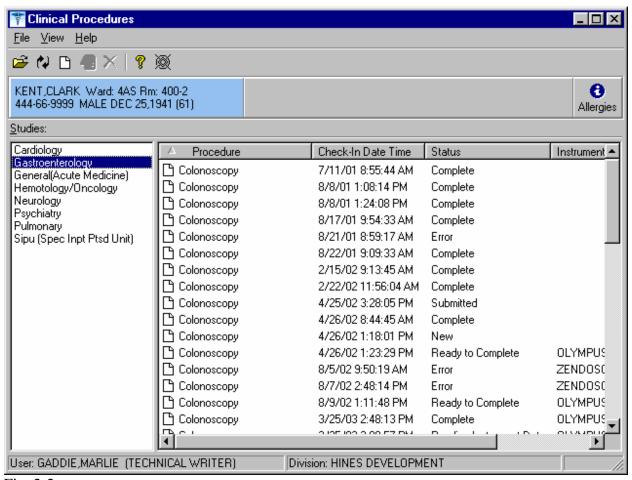


Fig. 2-2

The status column displays New, Submitted, Error, Ready to Complete, Pending Instrument Data, and Complete. Here is a description of each status type in (Fig. 2-2).

New - (The New status is only available with VistA Imaging.) A study has been
requested by VistA Imaging and needs to be checked-in and submitted to an
instrument. Example: You scanned in a consent form through the VistA Imaging
Capture Workstation. A new CP Study record is created along with a TIU document.

- Submitted This study has been submitted to the VistA Imaging Background
  Processor. The study report waits in the Imaging Background Processor queue to be
  copied or processed and placed on the VistA Imaging server. A study in this status is
  not accessible until VistA Imaging returns a status of Complete or Error and logs any
  errors encountered in the submission process.
- Error This study has encountered an error while being submitted to VistA Imaging. The error may have been caused when the TIU note was created, when a visit was created, when the results were linked to the procedure, or when the attachments were sent to the VistA Imaging server. Error messages are logged with the study and can be reviewed by opening the study in an error status.
- Complete This study has successfully created a TIU note for interpretation and images have been sent to VistA Imaging for the selected consult procedure order. If any attachments were included, they have been successfully copied to the VistA Imaging server.
- Pending Instrument Data (This status is only valid for bi-directional instruments that have not returned results.) The procedure request has been submitted to a bi-directional instrument and is waiting for the instrument to return the results. Studies in this status should not be opened until the instrument has returned the results, assigned them to the study, and marked the study as Ready to Complete.
  - If the "Auto Submit to VistA Imaging" checkbox is selected for the associated procedure in CP Manager, the study goes to Complete.
  - If the "Auto Submit to VistA Imaging" checkbox is not selected for the associated procedure in CP Manager, the study goes to Ready to Complete.
- Ready to Complete –
   When a study is done on a uni-directional instrument, the status displays as Ready to Complete.

When a study is submitted to a bi-directional instrument, the study remains in Pending Instrument Data status and changes to Ready to Complete after the study has received the data from the instrument. (Auto Submit to VistA Imaging is not selected.)

In the Ready to Complete status, you can open the study, view the Consult/Procedure order, and manually submit instrument results and external attachments to VistA Imaging.

A study can be deleted when it has a status of "Pending Instrument Data" and the user has the MD Manager key. A study should be deleted only if the study was sent to the wrong instrument, or if the patient was unable to complete the procedure. Select **File > Delete Study** and click **Delete**. A cancel order is sent to the device. If that device is not working, you must manually delete the order from the device. Refer to the manual for your specific instrument for instructions on deleting an order.

Working with CP User

## 3. Clinical Procedures Process, Part 1

This chapter describes the process to follow for ordering clinical procedures. (Although you can order several types of procedures in CPRS, you must follow the steps in this chapter to order clinical procedures.) This chapter uses the example of ordering a colonoscopy test to describe the Clinical Procedures ordering process. Be sure to follow the **required** steps in sequential order. You can do the optional steps as needed.

- 1. Order a consult procedure in CPRS. Required
- 2. Check in a new study. Required
- 3. Update study status to correct errors. Optional

## **Ordering a Consult Procedure in CPRS**

This section describes how to order a CP procedure, such as a study, a test, or an invasive intervention, such as a surgical or medical procedure, through CPRS. Keep in mind that you can only order a Clinical Procedure as a procedure order and not as a consult request.

In addition to becoming familiar with the CPRS ordering process, you can learn about the interpreter, which is the new user role within ASU that supports CP. The interpreter is a new User Role created by ASU that defines a user who can interpret (sign-off or verify) the procedure's final report. Clinical application coordinators define interpreters in the Consults package.

If you are an interpreter for a specific procedure, you can receive an alert when the procedure results are ready for review. Additional comments can be added if necessary along with the Procedure Summary code and the electronic signature. The following example describes how to order a colonoscopy procedure through the CPRS Consults tab.

Maul,Darth Mcmahon,Vincent Mdemployee,Disgruntled

Patient Selection Patient List Patients Kent,Clark OK No Default Providers C Clinics Cancel Kent,Clark <u>Ieam/Personal</u> C <u>Wards</u> Keyes,Barton Kent,Clark ∆II C Specialties Kilman,Buzz Kirk,James T SSN: 444-66-9999 Kirov,Sergi DOB: Dec 25,1941 Kpugsley,Lil Lake,Spring Male Landauer, Rolf Veteran Lando, Joseph 50% Service Connected Lennon John Location: 4AS Lime, Harry Loveless, Miguelito Room-Bed: 400-2 Lu,Lulu Martins, Holly Save Patient List Settings Matisse,Henri

1. Logon to CPRS. The Patient Selection window is displayed, Figure 3-1.

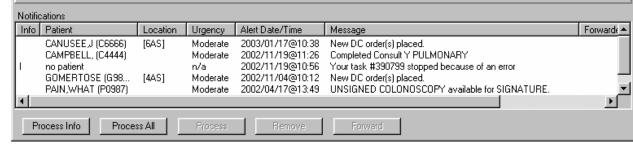


Fig. 3-1

2. Select a patient. Notice that Clark Kent is the selected patient. The Cover Sheet window is displayed, Figure 3-2.

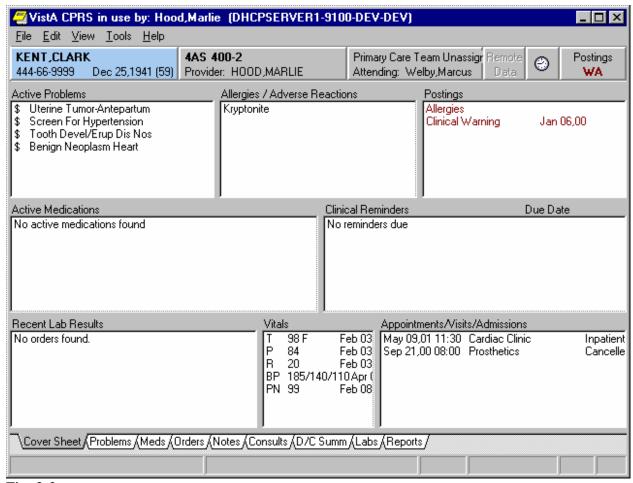


Fig. 3-2

3. Click the **Consults tab** at the bottom of the window, Figure 3-3.

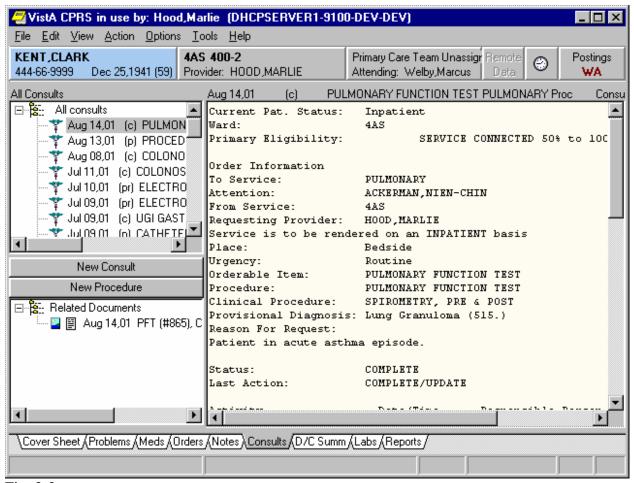


Fig. 3-3

- 4. If you want to review an existing Consult or procedure, select one in the list from the upper left panel. The lower left panel contains any supporting documents for the selected consult or procedure, and the larger right panel contains the order details.
- 5. Click **New Procedure** on the left side of the Consults tab. You can also order a clinical procedure from the Orders tab. Since Clark Kent is an inpatient, the Order a Procedure window, Figure 3-5, is displayed. Go to step 7 to order the procedure.

(If you were to select an outpatient, Figure 3-4 displays so you can enter a location. Go to step 6.)

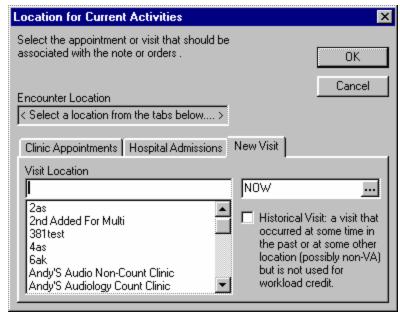
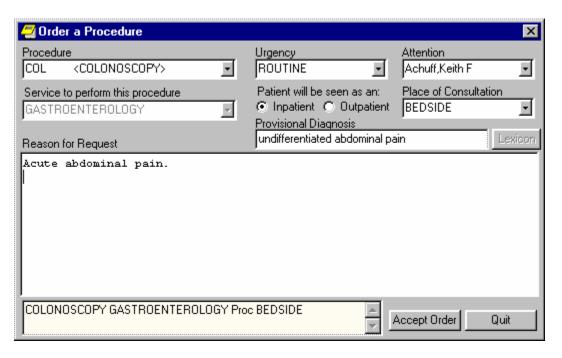


Fig. 3-4

- 6. For Outpatients, select either the Clinic Appointments or New Visit tab.
  - Select **Clinic Appointments** if the patient already has an appointment through Scheduling.
  - Select **New Visit** if an appointment has not been made through Scheduling, and then select a location from the list of Visit Locations. The Encounter Location is filled in automatically.
  - If the patient had existing admissions, these are displayed under the Hospital Admissions tab.
  - Go to step 7 to order the procedure.



#### Fig. 3-5

- 7. To order the colonoscopy procedure, select Colonoscopy from the Procedure dropdown list, Figure 3-5.
  - Complete the appropriate fields.
  - Click Accept Order.
  - Click Quit.
- 8. To sign the consult procedures, select **File** > **Review/Sign Changes**. Figure 3-6 is displayed.
  - Click the appropriate check box to select the colonoscopy.
  - Enter your electronic signature code.
  - Click **Sign** to return to the Consults tab. At this point, the procedure order is completed.

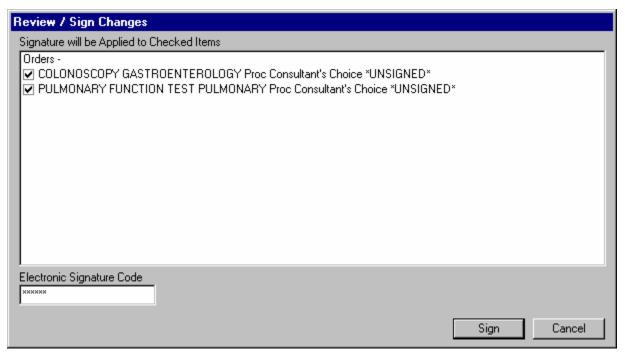


Fig. 3-6

9. Click the **Orders tab** to review the ordered procedures. These procedure orders appear on the Active Orders sheet (Fig. 3-7).

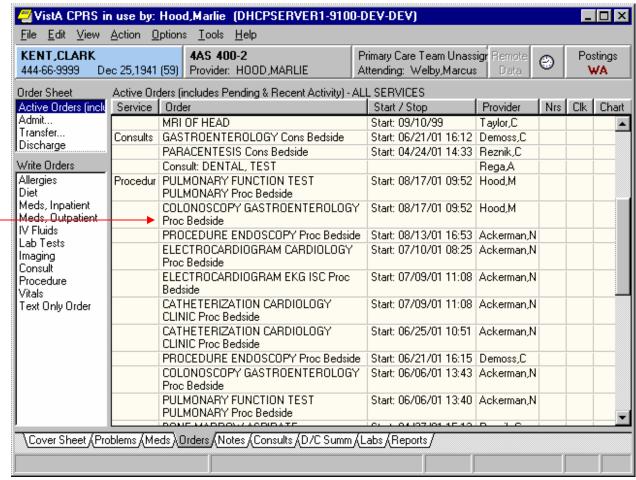


Fig. 3-7

### Check in a new study

Checking in a new study is the next step in the Clinical Procedures process. You need to check in a new study in CP User after a procedure has been ordered. (Keep in mind that the CP check-in is not related to the Scheduling check-in process.)

If you want to link multiple results to one procedure, you can check in multiple studies for the same procedure that you ordered through Consults. In this way, you do not have to order multiple procedure requests. In this example, the colonoscopy procedure was ordered and a new study for the colonoscopy procedure is being checked in.

- 1. To check in a new study, first logon to **CP User** and select the patient. Refer to <u>Selecting a Patient</u>, 2-2.
- 2. Choose **File** > **Check in New Study** to check in the patient.

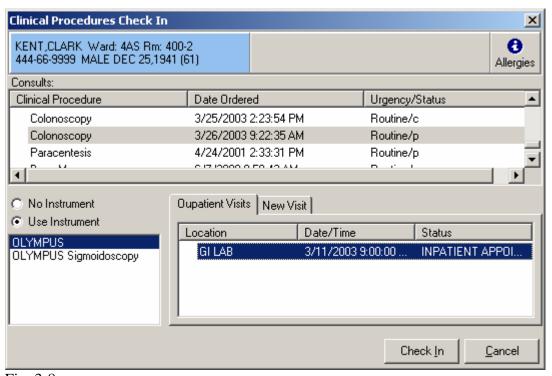


Fig. 3-8

3. Select a Consult procedure order for the selected patient. See Figure 3-8. The Clinical Procedure column lists the consult procedure orders. Notice that the colonoscopy procedure is selected.

Note: You can only select from Clinical Procedure request orders that are in the Pending (p), Scheduled (s), Partial Results (pr), Complete (c), and Active (a) statuses. Discontinue (d) and Cancel statuses are excluded.

- 4. Depending on the consult procedure you selected, the appropriate instruments for that procedure are displayed. Click the appropriate instrument if more than one is listed, or click **No Instrument** if no instrument is associated with this procedure. OLYMPUS is the appropriate instrument in this case and is selected.
- 5. You must associate each CP study with a PCE visit, which is the hospital location where the procedure is performed. Required.

For the majority of TIU notes created through CP, the visit association is completed in the background. If a visit has already been recorded but the note wasn't linked (standalone visits, such as telephone or walk-in visits), you can select a visit from the Clinical Procedures Check In edit screen (Fig. 3-8).

To link the CP study to the visit, select information from the Outpatients Visits tab on Figure 3-8. You can also select the New Visit tab and enter NOW for the date and time.

6. Click **Check-In.** The main CP User window, Figure 3-9, is displayed.

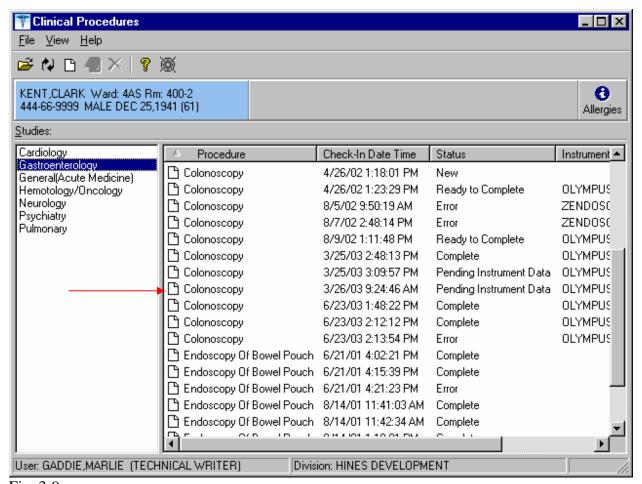


Fig. 3-9

- 7. If the study is checked-in for an instrument with a uni-directional interface, the status is Ready to Complete. If the study is checked-in for an instrument supported by a bi-directional interface, the status is Pending Instrument Data. (Notice on Figure 3-9, the colonoscopy status for 3/25 and 3/26 is Pending Instrument Data.)
- 8. At this point, the clinician performs the procedure on the instrument and transmits the results back to VistA.

If the instrument is bi-directional and the Auto Submit to VistA Imaging checkbox is selected for the procedure in CP Manager, the study status changes from Pending Instrument Data to Complete. This occurs after the result has been transmitted to VistA, matched to the study, and copied over to VistA Imaging successfully. The study is ready for interpretation. At this time, the CP process is complete and attachments cannot be associated with this study. See Clinical Procedures Process, Part 2.

If the instrument is uni-directional or if the instrument is bi-directional and the Auto Submit to VistA Imaging checkbox is not selected, the study status is Ready to Complete. Go to the next step (9) to manually complete the CP process.

- 9. Open the study (Figure 3-9) and add the instrument results and/or external attachments. You can only open studies that have an Error, Complete, Ready to Complete, or New status. When a study is in the Ready to Complete or New status, you can open the study and finish entering any data that was missed. An example of missed data is an external attachment that was not associated with the study.
  - Open this study and add results and/or external attachments. Click Open Study or select File > Open Study. Figure 3-10 is displayed.
  - Click +**Results** to select and submit the result to Vista Imaging. Only results for the patient and instrument used for the procedure are displayed. To select multiple results, hold down the CTRL key. To select a range of results, highlight the initial result, hold down the Shift key, and then click the last result, Figure 3-11.
  - You can also click +**Files** (Figure 3-10) to add additional attachments from the External Attachment Directory. If the External Attachment Directory has not been defined for this procedure, the last directory that was accessed may be displayed. You can browse for other attachments to link to the study.

Note: If the system parameter **Allow Non-Instrument Attachments** was not selected in CP Manager, +**Files** does not appear on the Clinical Procedures Study screen, you are not permitted to associate additional attachments with the procedure.

10. Submit the study. The images are copied to the RAID and the TIU document is created and associated with the procedure order.

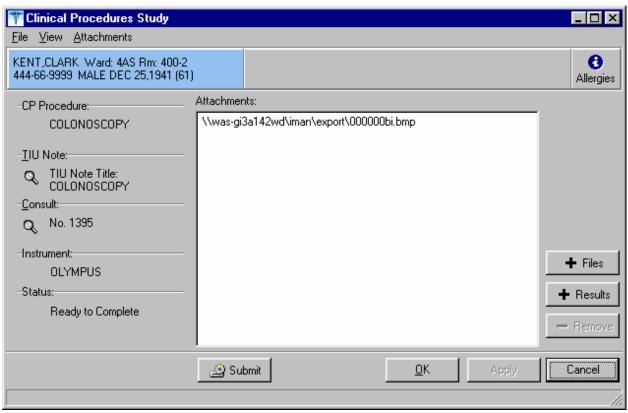


Fig. 3-10

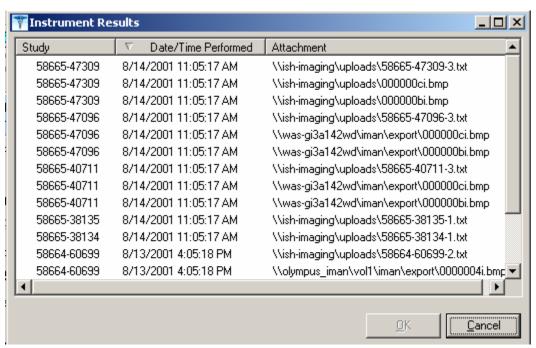


Fig. 3-11

11. From Figure 3-10, click the magnifying glass under TIU Note to view the TIU Note for that study if it is available. The magnifying glass for the TIU document is unavailable if the result has not been submitted to Vista imaging. Once the result is copied to Vista Imaging, you can view the TIU document of the study before or after the interpretation has been entered, Figure 3-12.

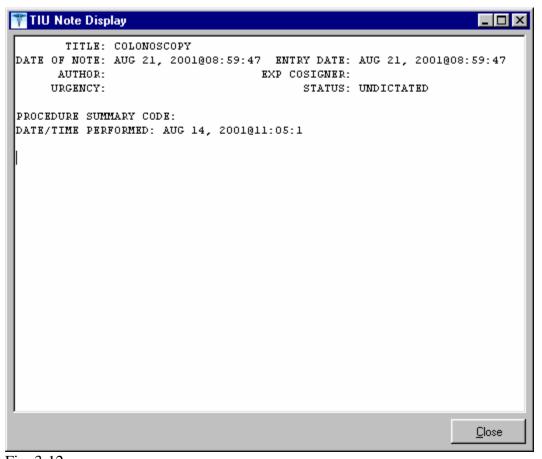


Fig. 3-12

12. From Figure 3-10, you can also click the magnifying glass under Consult to view the Consult report for that study.

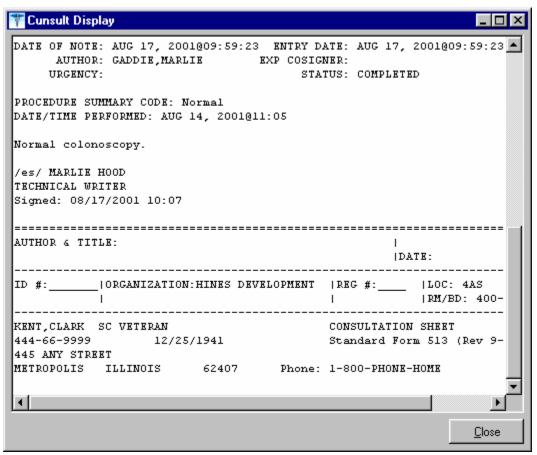


Fig. 3-13

## **Updating study status to correct errors**

If you open a study in the Error status and have the MD MANAGER key, the Update Study Status window is displayed. You must have the MD Manager key to access the Update Study Status menu option. See your clinical application coordinator or IRM for access to Update Study Status.

You can use Update Study Status to change the status of any study. Be careful when changing the status of a study. With Update Study Status, you can force a status change of a study if a problem occurs that you cannot fix with the Open a Study option.

- 1. Select **File** > **Update Study Status**, Fig. 3-14.
- 2. Select the status you want to change and click **OK**.
- 3. After you change the status, choose **File** > **Open a Study** and click **Submit** to resubmit the study.

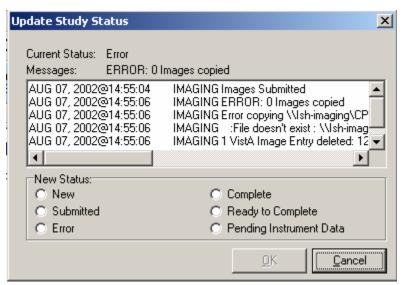


Fig. 3-14

Clinical Procedures Process, Part 1

# 4. Clinical Procedures Process, Part 2

This chapter describes the process to follow for completing clinical procedures. (This chapter uses the example of completing a colonoscopy to describe the Clinical Procedures process.) Be sure to follow the **required** steps in sequential order. You can do the optional steps as needed.

- 4. Complete the Procedure. Required
  - a. Enter an Interpretation into the TIU note. Required
  - b. Enter Encounter information. Required for workload counts
  - c. Sign off. Required
- 5. <u>View Clinical Procedures results</u>. Optional
- 6. Link consent forms and images to Clinical Procedures documents. Optional

### **Completing the Procedure**

To complete the procedure, you need to enter the interpretation into the TIU note, enter encounter information, and sign off. In this example, the colonoscopy study is being completed.

## Entering the interpretation into the TIU Note

1. Logon to **CPRS**. The Patient Selection screen is displayed, Figure 4-1.

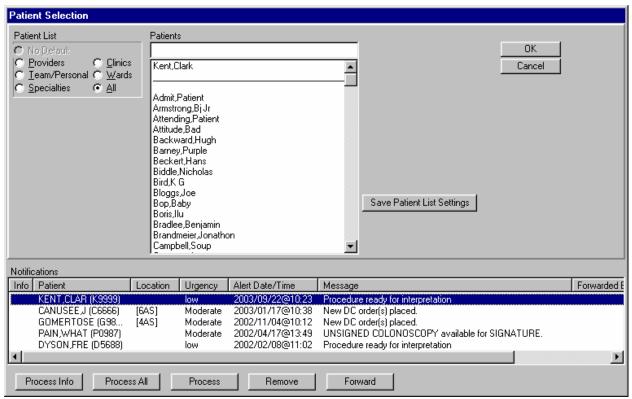
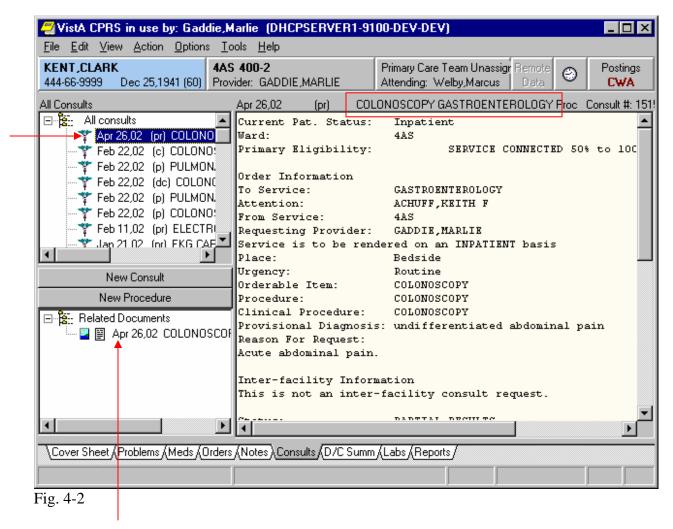


Fig. 4-1

- 2. In the Notifications box at the bottom of the screen, patients are listed with "Procedure ready for interpretation".
  - Click **Process Info** if you want to process an informational alert (see left column under Notifications, Fig. 4-1).
  - Click **Process All** if you want to process all of the items listed.
  - Click **Process** if you want to process an item through the Consults tab.
  - Click **Remove** if you want to remove an item from the list.
  - Click **Forward** if you want to forward the item to another person.

As part of this example, the patient, Clark Kent, is selected. To view results through Consults, click **Process**. The Consults tab is displayed.



Note the image and note document within the Related Documents window (Fig. 4-2).

The consult procedure now has a status of partial results (pr). The CP document has the TIU note title.

3. Click the CP title in the Related Documents window. The CP document is displayed in the right window, Fig. 4-3.

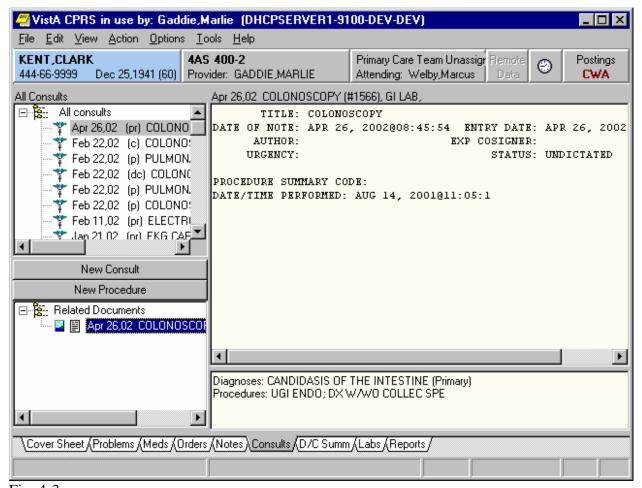


Fig. 4-3

The Author is not defined, Figure 4-3. This note is automatically created when the instrument result is sent and submitted and an author does not exist. The Interpreter who is interpreting the result is the default Author. The status of the document is always UNDICTATED when the results are ready for interpretation.

4. To select the results that you want to interpret, choose **Action** > **Consult Results** > **Complete/Update Results**, Figure 4-4.

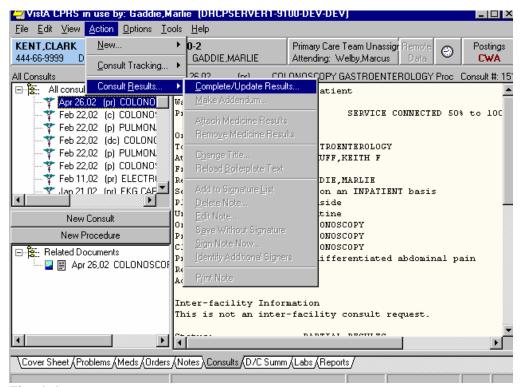


Fig. 4-4

**Note**: To interpret the result, select the Complete/Update Results option. The **Enter Required Fields** dialog box is displayed, Figure 4-5. The interpreter's name displays by default in the Author field.



Fig. 4-5

- 5. Select the appropriate **Procedure Summary Code** from the list (Fig. 4-5). The Procedure Summary Codes include Abnormal, Normal, Borderline, and Incomplete.
- 6. Enter a **Procedure Date/Time.** Depending on the instrument, the Procedure Date/Time is passed in the HL7 message from the instrument. As the interpreter, you can accept the default. If the instrument does not pass the Procedure Date/Time, the interpreter has to enter a Procedure Date/Time.

The Procedure Summary Code and Procedure Date/Time are required fields for the initial note that you are editing.

If you close the **Enter Required Fields** dialog box without entering the requested information, CPRS prompts the interpreter again.

Any subsequent note created on the same procedure after this initial note does not require the Procedure Summary Code and Procedure Date/Time fields. The fields are optional on subsequent notes.

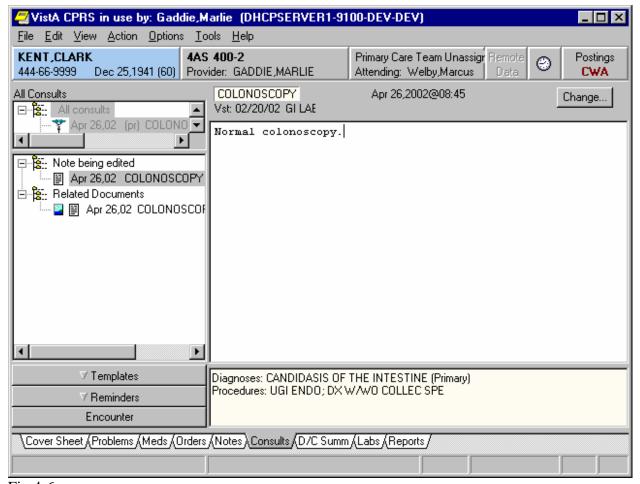


Fig 4-6

7. Enter an interpretation in the space on the right side of the screen for the highlighted (current) consult procedure (Fig. 4-6).

### **Entering Encounter Information**

You can now enter encounter form information.

8. To enter the encounter information and complete the consult procedure, you must select **Action** > **Consult Results** > **Sign Note Now**.

You can also select the **Encounter** drawer (Fig. 4-6) to directly enter encounter information.



Fig. 4-7

This window (Fig. 4-7) asks if you want to enter encounter information now. (Fig. 4-7 is displayed depending on how CPRS parameters are set. See the Implementation Guide for information on defining CPRS parameters.)

9. Click **Yes** to enter encounter information, or click **No** to skip this step. If you choose No, you can enter the information at a later time. In this example, the Yes button is clicked and encounter information is entered.

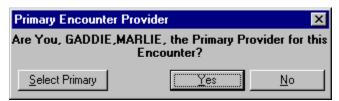


Fig. 4-8

Figure 4-8 allows you to verify the primary provider for this encounter form.

10. Click Yes.

CPRS brings up the Encounter Form that was set up for the Hospital Location, where the procedure was performed. The **Visit Type** tab is displayed.

11. Enter appropriate information for visit type. For example, in Figure 4-9, the following information was entered:

**Type of Visit**. Established Patient

Section Name. Intermediate Exam 11-19 Min.

Visit Related to Service Connected Condition. Yes

Current providers for this encounter. Gaddie, Marlie

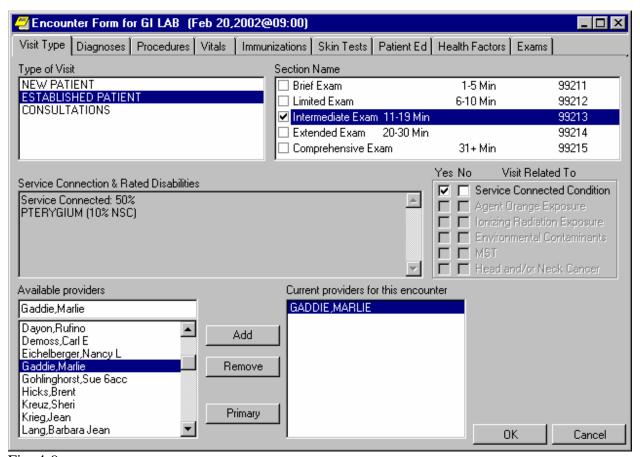


Fig. 4-9

#### 12. Click the **Diagnoses tab**.

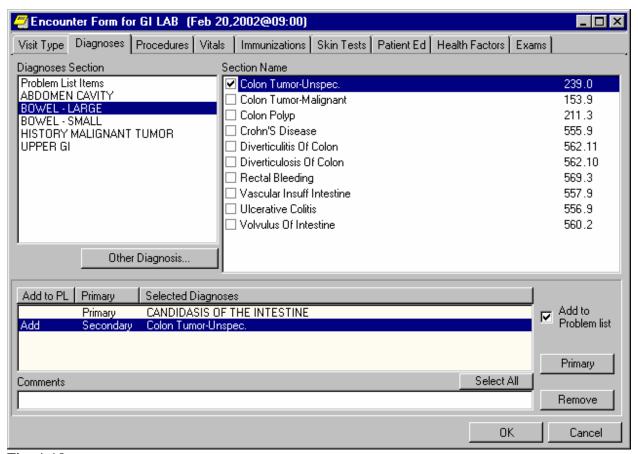


Fig. 4-10

- 13. Enter appropriate information for diagnoses. See Figure 4-10.
- 14. Click the **Procedures tab**.

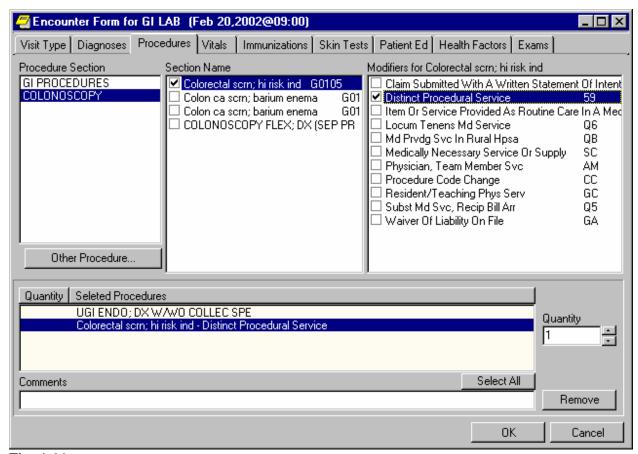


Fig. 4-11

- 15. Enter appropriate procedure information. See Figure 4-11.
- 16. Click the Exams tab.

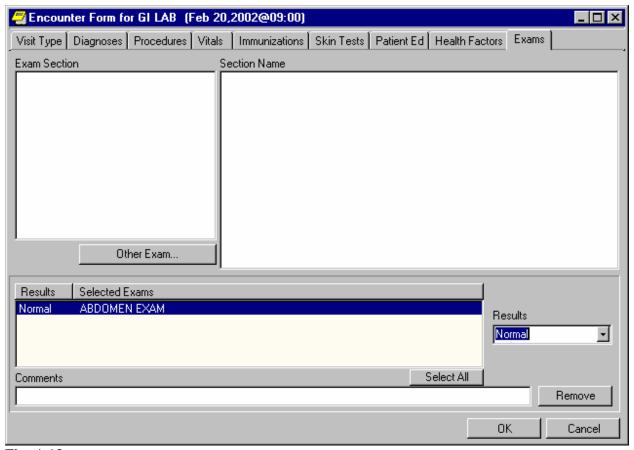


Fig. 4-12

17. Enter appropriate exam information. (See Fig. 4-12.) Click **OK** to return to the Consults tab.

### **Signing Off**

18. To complete the consult procedure, select **Action** > **Consult Results** > **Sign Note Now**.

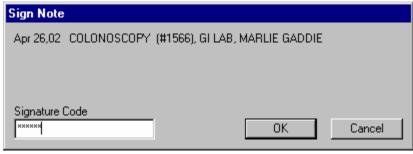


Fig. 4-13

19. Enter your electronic signature to sign the TIU note and complete the consult procedure.

#### 20. Click **OK**.

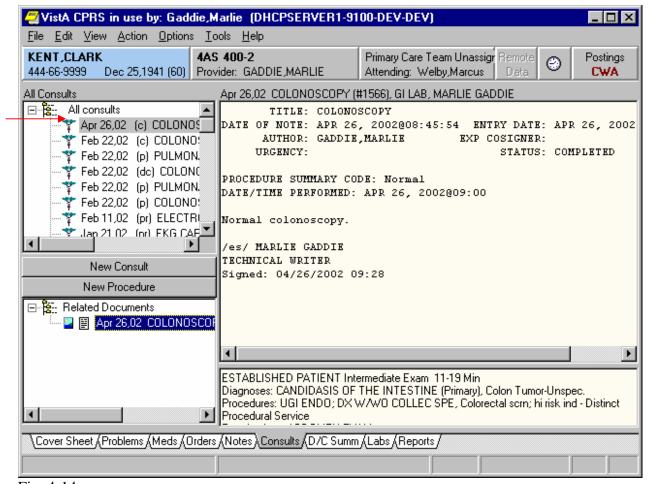


Fig. 4-14

- The consult procedure now has a status of complete (Fig. 4-14).
- The procedure location (GI LAB in Fig. 4-14) is used for workload reporting.
- The workload for the procedure goes through the standard TIU interface with PCE (Patient Care Encounter).

Even though the consult is complete, you can still attach additional files and studies to the same order.

### **Viewing Clinical Procedures Results**

You can go to VistA Imaging to view results. If you as the interpreter did not interpret the result right after the procedure was performed, you may want to view the results before you enter an interpretation. In the colonoscopy example, the interpretation was entered in Fig. 4-6.

- 1. Logon to CPRS.
- 2. Select **Tools** > **VistA Imaging Display**, Fig. 4-15. The patient's Abstract list is displayed, Fig. 4-16.

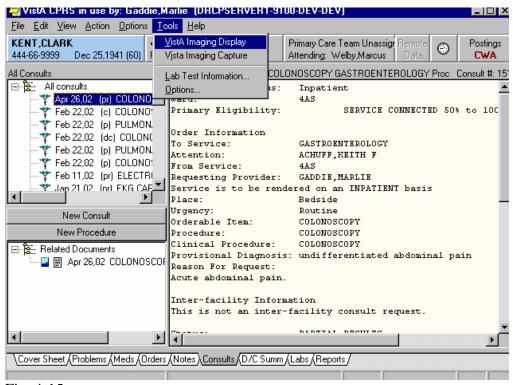


Fig. 4-15

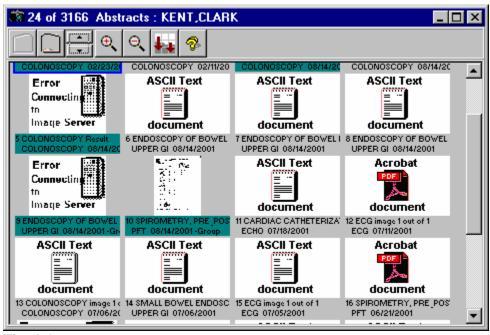


Fig. 4-16

**Note:** VistA Imaging accepts procedure results in .bmp, jpg, jpeg, html, .pdf, .rft, tiff, and .txt formats.

1. Select **View** > **Clinical Procedures** to view Clinical Procedures document titles. The list of CP documents for the patient is displayed. (Fig. 4-17).

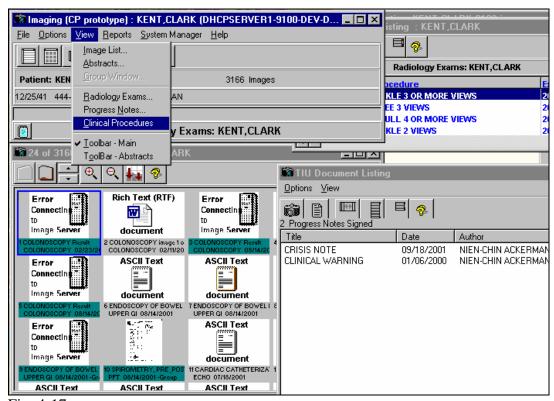


Fig. 4-17

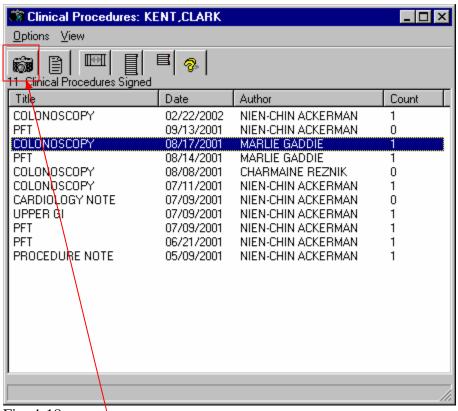


Fig. 4-18

2. Click a document title, and then click the camera icon to display the associated images for that CP document, Figure 4-18.

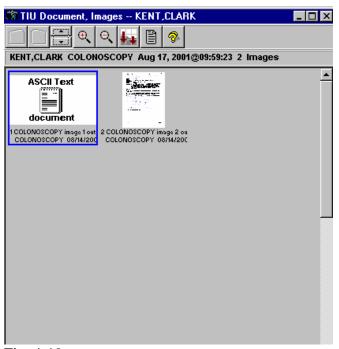


Fig. 4-19

- 3. Double-click the abstract to open the result file, (Fig. 4-19)
- 4. In the screen where the CP documents are listed, Figure 4-18, click the CP title, and then click the report icon next to the camera. The TIU Note is displayed, Fig. 4-20.

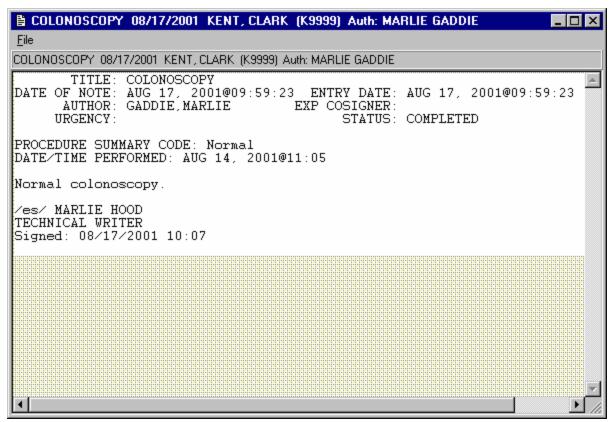


Fig. 4-20

Fig. 4-20 is an example of a document that has been interpreted and signed.

If you launch Imaging Display before the document is interpreted, the Author field is undefined and the status is UNDICTATED. Some users may want to view the results before interpreting.

# **Linking Consent Forms and Images to CP Documents**

As the interpreter, you can link a consent form or other images to CP documents by using VistA Imaging Capture. VistA Imaging Capture software can capture clinical images or scanned documents and attach them to Clinical Procedures. Refer to the VistA Imaging 3.0 MAG\*3.0\*7 Patch Document at the following website:

http://vaww.va.gov/imaging/3.0patches.htm

Clinical Procedures Process, Part 2

# 5. Glossary

Access Code A unique sequence of characters known by and assigned only to the user, the system manager and/or designated alternate(s). The access code (in conjunction with the verify code) is used by the computer to identify authorized users.

Action A functional process that a clinician or clerk uses in the TIU computer program. For example, "Edit" and "Search" are actions. Protocol is another name for Action.

ADP Coordinator/ADPAC/Application Coordinator Automated Data Processing Application Coordinator. The person responsible for implementing a set of computer programs (application package) developed to support a specific functional area such as clinical procedures, PIMS, etc.

Application A system of computer programs and files that have been specifically developed to meet the requirements of a user or group of users.

Archive The process of moving data to some other storage medium, usually a magnetic tape, and deleting the information from active storage in order to free-up disk space on the system.

ASU Authorization/Subscription Utility, an application that allows sites to associate users with user classes, allowing them to specify the level of authorization needed to sign or order specific document types and orderables. ASU is distributed with TIU in this version; eventually it will probably become independent, to be used by many VistA packages.

Attachments Attachments are files or images stored on a network share that can be linked to the CP study. CP is able to accept data/final result report files from automated instruments. The file types that can be used as attachments are the following:

.txt Text files

.rtf Rich text files

.jpg JPEG Images

.jpeg JPEG Images

.bmp Bitmap Images

.tiff TIFF Graphics (group 3 and group 4 compressed and uncompressed types)

.pdf Portable Document Format

.html Hypertext Markup Language

.DOC (Microsoft Word files) are not supported. Be sure to convert .doc files to .rtf or to .pdf format.

Background Processing Simultaneous running of a "job" on a computer while working on another job. Examples would be printing of a document while working on another, or the software might do automatic saves while you are working on something else.

- Backup Procedures The provisions made for the recovery of data files and program libraries and for restart or replacement of ADP equipment after the occurrence of a system failure.
- Boilerplate Text A pre-defined TIU template that can be filled in for Titles, Speeding up the entry process. TIU exports several Titles with boilerplate text which can be modified to meet specific needs; sites can also create their own.
- Browse Lookup the file folder for a file that you would like to select and attach to the study. (e.g., clicking the "..." button to start a lookup).
- Bulletin A canned message that is automatically sent by MailMan to a user when something happens to the database.
- Business Rule Part of ASU, Business Rules authorize specific users or groups of users to perform specified actions on documents in particular statuses (e.g., an unsigned TIU note may be edited by a provider who is also the expected signer of the note).
- Class Part of Document Definitions, Classes group documents. For example, "CLINICAL PROCEDURES" is a class with many kinds of Clinical Procedures notes under it. Classes may be subdivided into other Classes or Document Classes. Besides grouping documents, Classes also store behavior which is then inherited by lower level entries.
- Consult Referral of a patient by the primary care physician to another hospital service/ specialty, to obtain a medical opinion based on patient evaluation and completion of any procedures, modalities, or treatments the consulting specialist deems necessary to render a medical opinion.
- Contingency Plan A plan that assigns responsibility and defines procedures for use of the backup/restart/recovery and emergency preparedness procedures selected for the computer system based on risk analysis for that system.
- CP Clinical Procedures.
- CP Definition CP Definitions are procedures within Clinical Procedures.
- CP Study A CP study is a process created to link the procedure result from the medical device or/and to link the attachments browsed from a network share to the procedure order.
- CPRS Computerized Patient Record System. A comprehensive VistA program, which allows clinicians and others to enter and view orders, Progress Notes and Discharge Summaries (through a link with TIU), Problem List, view results, reports (including health summaries), etc.
- Data Dictionary A description of file structure and data elements within a file.
- Device A hardware input/output component of a computer system (e.g., CRT, printer).

Document Class Document Classes are categories that group documents (Titles) with similar characteristics together. For example, Cardiology notes might be a Document Class, with Echo notes, ECG notes, etc. as Titles under it. Or maybe the Document Class would be Endoscopy Notes, with Colonoscopy notes, etc. under that Document Class.

Document Definition Document Definition is a subset of TIU that provides the building blocks for TIU, by organizing the elements of documents into a hierarchy structure. This structure allows documents (Titles) to inherit characteristics (such as signature requirements and print characteristics) of the higher levels, Class and Document Class. It also allows the creation and use of boilerplate text and embedded objects.

Edit Used to change/modify data typically stored in a file.

Field A data element in a file.

File The M construct in which data is stored for retrieval at a later time. A computer record of related information.

File Manager or FileMan Within this manual, FileManager or FileMan is a reference to VA FileMan. FileMan is a set of M routines used to enter, edit, print, and sort/search related data in a file, a database.

File Server A machine where shared software is stored.

Gateway The software that performs background processing for Clinical Procedures.

Global An M term used when referring to a file stored on a storage medium, usually a magnetic disk.

GUI Graphical User Interface - a Windows-like screen that uses pull-down menus, icons, pointer devices, and other metaphor-type elements that can make a computer program more understandable, easier to use, allow multi-processing (more than one window or process available at once), etc.

Interpreter Interpreter is a user role exported with USR\*1\*19 to support the Clinical Procedures Class. The role of the Interpreter is to interpret the results of a clinical procedure. Users who are authorized to interpret the results of a clinical procedure are sent a notification when an instrument report and/or images for a CP request are available for interpretation. Business rules are used to determine what actions an interpreter can perform on a document of a specified class, but the interpreter themselves are defined by the Consults application. These individuals are 'clinical update users' for a given consult service.

IRMS Information Resource Management Service.

- Kernel A set of software utilities. These utilities provide data processing support for the application packages developed within the VA. They are also tools used in configuring the local computer site to meet the particular needs of the hospital. The components of this operating system include: MenuMan, TaskMan, Device Handler, Log-on/Security, and other specialized routines.
- LAYGO An acronym for Learn As You Go. A technique used by VA FileMan to acquire new information as it goes about its normal procedure. It permits a user to add new data to a file.
- M Formerly known as MUMPS or the Massachusetts (General Hospital) Utility Multi-Programming System. This is the programming language used to write all VistA applications.
- MailMan An electronic mail, teleconferencing, and networking system.
- Menu A set of options or functions available to users for editing, formatting, generating reports, etc.
- Module A component of a software application that covers a single topic or a small section of a broad topic.
- Namespace A naming convention followed in the VA to identify various applications and to avoid duplication. It is used as a prefix for all routines and globals used by the application.
- Network Server Share A machine that is located on the network where shared files are stored.
- Notebook This term refers to a GUI screen containing several tabs or pages.
- OI Office of Information, formerly known as Chief Information Office Field Office, Information Resource Management Field Office, and Information Systems Center.
- Option A functionality that is invoked by the user. The information defined in the option is used to drive the menu system. Options are created, associated with others on menus, or given entry/exit actions.
- Package Otherwise known as an application. A set of M routines, files, documentation and installation procedures that support a specific function within VistA.
- Page This term refers to a tab on a GUI screen or notebook.
- Password A protected word or string of characters that identifies or authenticates a user, a specific resource, or an access type (synonymous with Verify Code).
- Pointer A special data type of VA FileMan that takes its value from another file. This is a method of joining files together and avoiding duplication of information.

- Procedure Request Any procedure (EKG, Stress Test, etc.) which may be ordered from another service/specialty without first requiring formal consultation.
- Program A set of M commands and arguments, created, stored, and retrieved as a single unit in M.
- Queuing The scheduling of a process/task to occur at a later time. Queuing is normally done if a task uses up a lot of computer resources.
- RAID Redundant Array of Inexpensive Drives. Imaging uses this to store images.
- Result A consequence of an order. Refers to evaluation or status results. When you use the Complete Request (CT) action on a consult or request, you are transferred to TIU to enter the results.
- <RET> Carriage return.
- Routine A set of M commands and arguments, created, stored, and retrieved as a single unit in M.
- Security Key A function which unlocks specific options and makes them accessible to an authorized user.
- Sensitive Information Any information which requires a degree of protection and which should be made available only to authorized users.
- Site Configurable A term used to refer to features in the system that can be modified to meet the needs of each site.
- Software A generic term referring to a related set of computer programs. Generally, this refers to an operating system that enables user programs to run.
- Status Symbols Codes used in order entry and Consults displays to designate the status of the order.
- Task Manager or TaskMan A part of Kernel which allows programs or functions to begin at specified times or when devices become available. See Queuing.
- Title Titles are definitions for documents. They store the behavior of the documents which use them.
- TIU Text Integration Utilities.
- User A person who enters and/or retrieves data in a system, usually utilizing a CRT.

- User Class User Classes are the basic components of the User Class hierarchy of ASU (Authorization/Subscription Utility) which allows sites to designate who is authorized to do what to documents or other clinical entities.
- User Role User Role identifies the role of the user with respect to the document in question (e.g., Author/Dictator, Expected Signer, Expected Cosigner, Attending Physician, etc.).
- Utility An M program that assists in the development and/or maintenance of a computer system.
- Verify Code A unique security code which serves as a second level of security access. Use of this code is site specific; sometimes used interchangeably with a password.
- VistA Veterans Health Information Systems and Technology Architecture.
- Workstation A personal computer running the Windows 9x or NT operating system.

# 6. Index

В	Н
benefits, 1-6	hospital location, 1-7
С	1
checking in studies, 3-8 complete status, 2-4 consent forms linking, 4-19 consult procedures ordering, 3-1 CP process, 3-1, 4-1 CP results viewing, 4-14 CP User, 2-1 Icons, 2-1 opening, 2-1 selecting a patient, 2-2	images displaying, 4-14 imaging capture, 4-19 display, 4-14 imaging file types, 1-7 intended audience, 1-6 interpretations entering, 4-1 introduction, 1-1  N new status, 2-3
CPRS ordering a consult procedure, 3-1	ordering consult procedures, 3-1
defining the CP User window, 2-3 deleting study, 2-4  E encounter information, 4-7	patient selecting, 2-2 selecting in CP User, 2-2 pending instrument data
errors status, 2-4 updating, 3-14	status, 2-4 process flow diagrams, 1-2  R ready to complete
file types, 1-7	status, 2-4 related manuals, 1-6
G Glossary, 5-1	sign off, 4-12 status complete, 2-4

#### Index

error, 2-4	studies, 3-10
types of, 2-3	
study	Т
checking in, 3-8	TIU
completing, 4-1	entering interpretations, 4-1
deleting, 2-4	emering interpretations, 1 1
fixing errors, 3-14	V
submitting, 3-10	vianina nasulta 4 14
updating status, 3-14	viewing results, 4-14
study status	W
types of, 2-3	**
submitted	workload reporting, 1-7
status, 2-4	
submitting	